



## Basic Quantitative Research Methods for Urban Planners

Reid Ewing and Keunhyun Park (2020). New York, NY: Routledge Press. 342 pages. \$42.95 (paperback) \$120.93 (hardcover)

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## Planning Methods

### **Basic Quantitative Research Methods for Urban Planners**

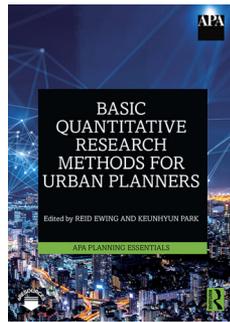
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**Reviewed by Manish Shirgaokar, University of Colorado Denver**

In a world that is getting more numbers driven (think of Big Data), are planners disadvantaged in decision making if they do not think quantitatively? Various textbooks are available to those who use statistical inference in their work or teach quantitative thinking. Some well-known texts include Healey and Donoghue (2020), Lane et al. (2019), Witte and Witte (2016), and Wheelan (2014). Planners, until recently, have had to learn from textbooks written by non-planners. Ewing and Park offer a fresh departure because this book's contributors have written about statistics using a planning vocabulary, making this volume unique. The book offers a much-needed perspective on how to think numerically when addressing planning questions. This volume does much more than teach statistics: It embarks on a project of helping the reader understand how to frame a question, what methods to employ, and how to test hypotheses. This book will help analysts, educators, planners, researchers, and planning scholars working on issues that need quantitative reasoning.

Clearly explained are the conceptual underpinnings of various statistical techniques. An essential feature of this book is the addition of case studies that demonstrate analytical techniques. It is one thing to teach someone how to run a difference of means test but quite another to show through examples how this statistical test can be used for a planning issue. The information increases in complexity as one progresses forward in this textbook. The chapter on technical writing (chapter 2) can be useful to anyone writing about planning. The sections on types of research, including chapter 3 (types of research), chapter 4 (types of data), chapter 5 (conceptual frameworks), and chapter 6 (validity and reliability), will be helpful to multiple audiences, including instructors, researchers at all levels, policy analysts, and practicing planners who need to answer questions using numerical analysis. The chapters on



descriptive statistics and visualizing data through analysis of variance (chapters 7–11) would serve well in any quantitative methods course and for planners in practice who work with numbers. The final chapters covering regression and experimental design will be most useful for instructors of advanced statistics courses, analysts, and researchers.

Although recognizing that designing a textbook is no small feat, I would offer three broad suggestions to make this a stronger text. First, planning works within the constraints of existing information but is often trying to grasp alternative futures. Quantitative methods offer some tools for developing scenarios and running sensitivity analyses across a range of possibilities. Sensitivity analysis is an area that the volume does not address, particularly in the regression chapters (chapters 12 and 13). Second, a useful addition would be a chapter that expands on Sanchez et al.'s discussion on data processing and management. Students and planners may work with raw data sets that they collect or that a local agency assembles. Instructions on how to decide which records are useful, when to delete any information (if at all), recoding, cleaning, and joining various data sets are critical skills that all analysts need. Third, all the exercises in the book have step-by-step instructions in the IBM SPSS environment. The authors make an appreciable effort to demonstrate the same steps in the software R, but there is scope for improving the R-based instructions (including instructions in the software RStudio). This is important for two reasons, as the editors indicate: 1) R has become a robust platform for numerical analysis and 2) in the interest of democratizing learning, giving users detailed instructions to work in zero-cost software would be welcome. Last, a minor quibble: An online data repository that houses the anonymized data sets used in the exercises would make this textbook eminently more convenient for users.

For more advanced analysts, the companion volume covers other aspects of technical writing and statistical techniques. However, *Basic Quantitative Research Methods for Urban Planners* should meet most of the needs of analysts, educators, planners, and researchers wanting to leverage the strength of numbers. The e-book and paperback are reasonably priced, making it easier for instructors to assign it as a course textbook. I would consider using this volume in my courses on quantitative methods as a textbook combined with other readings.

Ewing and Park have given the planning field an effective tool for conducting numeric analysis, learning from, and referring to when thinking quantitatively.

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